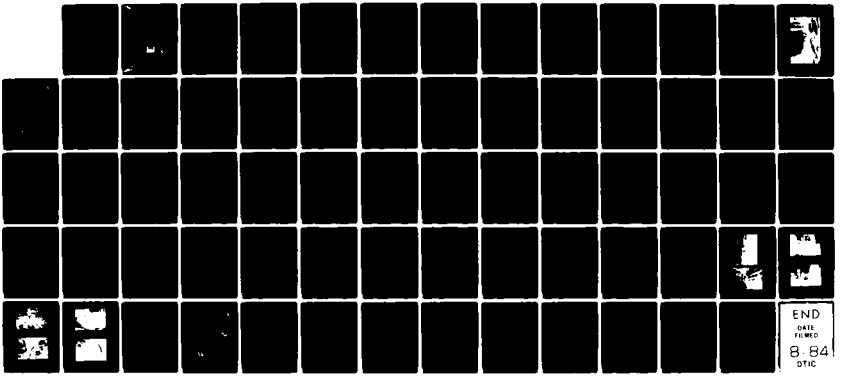
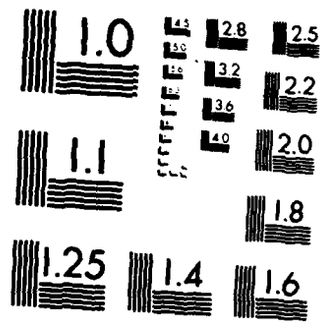
AD-A142 878 NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS 1/1
PARKS POND DAM (CT 00..(U) CORPS OF ENGINEERS WALTHAM
MA NEW ENGLAND DIV JUL 80

UNCLASSIFIED F/G 13/13 NL



END
DATE FILMED
8-84
DTIC

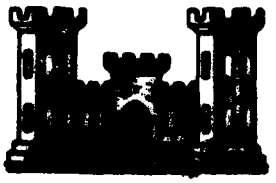


HOUSATONIC RIVER BASIN

DANBURY CONNECTICUT

PARKS POND DAM
CT 00071

PHASE I INSPECTION REPORT
NATIONAL DAM INSPECTION PROGRAM



DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS. 02154

JULY 1980

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER CT 00071	2. GOVT ACCESSION NO. AD-A147 878	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Housatonic River Basin Danbury Conn., Parks Pond Dam NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS		5. TYPE OF REPORT & PERIOD COVERED INSPECTION REPORT 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) U.S. ARMY CORPS OF ENGINEERS NEW ENGLAND DIVISION		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS DEPT. OF THE ARMY, CORPS OF ENGINEERS NEW ENGLAND DIVISION, NEDED 424 TRAPELO ROAD, WALTHAM, MA. 02254		12. REPORT DATE July 1980 13. NUMBER OF PAGES 55
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

APPROVAL FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Cover program reads: Phase I Inspection Report, National Dam Inspection Program; however, the official title of the program is: National Program for Inspection of Non-Federal Dams; use cover date for date of report.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

DAMS, INSPECTION, DAM SAFETY,

Housatonic River Basin
Danbury Conn., Parks Pond Dam

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Parks Pond Dam is a cyclopean masonry/earth embankment that is approx. 180 ft. long and 12 ft. high. The earth embankment is on the downstream side and has a 2:1 slope. The upstream face is cyclopean masonry with a vertical face. The spillway is located on the southern half of the dam and consists of a 30.5 ft. long weir. There is a lower gate house for the control of a discharge pipe that passes through the base of the dam. The size of the pipe is unknown. The balve for the operation of the discharge pipe is inoperable. The drainage area is 0.5 square miles and the reservoir has 100 acre-feet of available storage.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION. CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM. MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:
NEDED

8 OCT 1980

Honorable Ella T. Grasso
Governor of the State of Connecticut
State Capitol
Hartford, Connecticut 06115

Dear Governor Grasso:

Inclosed is a copy of the Parks Pond Dam Phase I Inspection Report, which was prepared under the National Program for Inspection of Non-Federal Dams. This report is presented for your use and is based upon a visual inspection, a review of the past performance and a brief hydrological study of the dam. A brief assessment is included at the beginning of the report. I have approved the report and support the findings and recommendations described in Section 7 and ask that you keep me informed of the actions taken to implement them. This follow-up action is a vitally important part of this program.

A copy of this report has been forwarded to the Department of Environmental Protection, the cooperating agency for the State of Connecticut. In addition, a copy of the report has also been furnished the owner, Mr. Paul d'Evegnee, 21 Sunset Drive, Danbury, Connecticut 06810.

Copies of this report will be made available to the public, upon request, by this office under the Freedom of Information Act. In the case of this report the release date will be thirty days from the date of this letter.

I wish to take this opportunity to thank you and the Department of Environmental Protection for your cooperation in carrying out this program.

Sincerely,

MAX B. SCHEIDER
Colonel, Corps of Engineers
Division Engineer

Incl
As stated

PARKS POND DAM

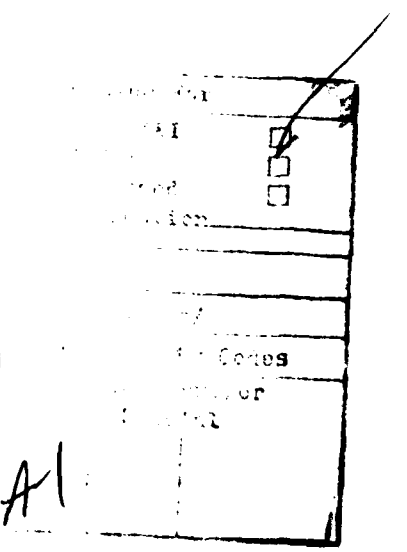
CT 00071

HOUSATONIC RIVER BASIN

DANBURY, CONNECTICUT

PHASE I INSPECTION REPORT

NATIONAL DAM INSPECTION PROGRAM



NATIONAL DAM INSPECTION PROGRAM

PHASE I INSPECTION REPORT

Identification Number:	CT 00071
Name:	Parks Pond Dam
Town:	Danbury
County and State:	Fairfield County, Connecticut
Stream:	Parks Pond Brook
Date of Inspection:	April 22, 1980

BRIEF ASSESSMENT

Parks Pond Dam is a cyclopean masonry/earth embankment that is approximately 180 feet long and 12 feet high. The earth embankment is on the downstream side and has a 2:1 slope. The upstream face is cyclopean masonry with a vertical face. The spillway is located on the southern half of the dam and consists of a 30.5-foot long weir. There is a lower gate house for the control of a discharge pipe that passes through the base of the dam. The size of the pipe is unknown. The valve for the operation of the discharge pipe is inoperable. The drainage area is 0.5 square miles and the reservoir has 100 acre-feet of available storage.

The assessment of the dam is based on the visual inspection, past operational performance and hydraulic/hydrologic computations. The dam is judged to be in poor condition with several areas that require attention. These areas include seepage through the dam and around the spillway's west training wall, deteriorated concrete of the spillway and upstream face of the dam, vegetation on the embankments and along the toe of the dam and the nonoperating status of the blowoff.

The dam is classified as small and has a significant hazard potential in accordance with guidelines established by the Corps of Engineers. The test flood for this dam is 1/2 the Probable Maximum Flood (PMF). The test

flood inflow is 625 cfs and the routed test flood outflow is 473 cfs. The test flood outflow will overtop the dam by 0.55 feet.

It is recommended that the owner engage the services of a qualified registered engineer experienced in the design of dams to investigate the seepage through the dam, prepare a detailed hydraulic/hydrologic study to determine the spillway's adequacy, and remove trees from the embankment. It is also recommended that the owner clear the debris from the spillway channel; remove vegetation from the downstream face and toe; repair the discharge valve and concrete; establish a formal warning stystem; and initiate a program of operation and maintenance and an annual inspection program.

The owner should implement the recommendations and remedial measures described above and in greater detail in Section 7 within one year after receipt of this Phase I Inspection Report.

Joseph F. Merluzzo
Connecticut P.E. #7639
Project Manager

Gary J. Giroux
Connecticut P.E. #11477
Project Engineer

This Phase I Inspection Report on PARKS POND DAM has been reviewed by the undersigned Review Board members. In our opinion, the reported findings, conclusions, and recommendations are consistent with the Recommended Guidelines for Safety Inspection of Dams, and with good engineering judgment and practice, and is hereby submitted for approval.

Richard J. DiBuono

RICHARD DIBUONO, MEMBER
Water Control Branch
Engineering Division

ARAMAST MAHTESIAN, MEMBER
Geotechnical Engineering Branch
Engineering Division

Carney M. Terzian

CARNEY M. TERZIAN, CHAIRMAN
Design Branch
Engineering Division

APPROVAL RECOMMENDED:

Joe B. Frear

JOE B. FRIAR
Chief, Engineering Division

PREFACE

This report is prepared under guidance contained in the Recommended Guidelines for Safety Inspection of Dams, for Phase I Inspections. Copies of these guidelines may be obtained from the Office of Chief of Engineers, Washington, D.C. 20314. The purpose of a Phase I Inspection is to identify expeditiously those dams which may pose hazards to human life or property. The assessment of the general condition of the dam is based upon available data and visual inspections. Detailed investigations and analyses involving topographic mapping, subsurface investigations, testing, and detailed computational evaluations are beyond the scope of a Phase I Inspection; however, the investigation is intended to identify any need for such studies.

In reviewing this report, it should be realized that the reported condition of the dam is based on observations of field conditions at the time of inspection along with data available to the inspection team. In cases where the reservoir was lowered or drained prior to inspection, such action, while improving the stability and safety of the dam, removes the normal load on the structure and may obscure certain conditions which might otherwise be detectable if inspected under the normal operating environment of the structure.

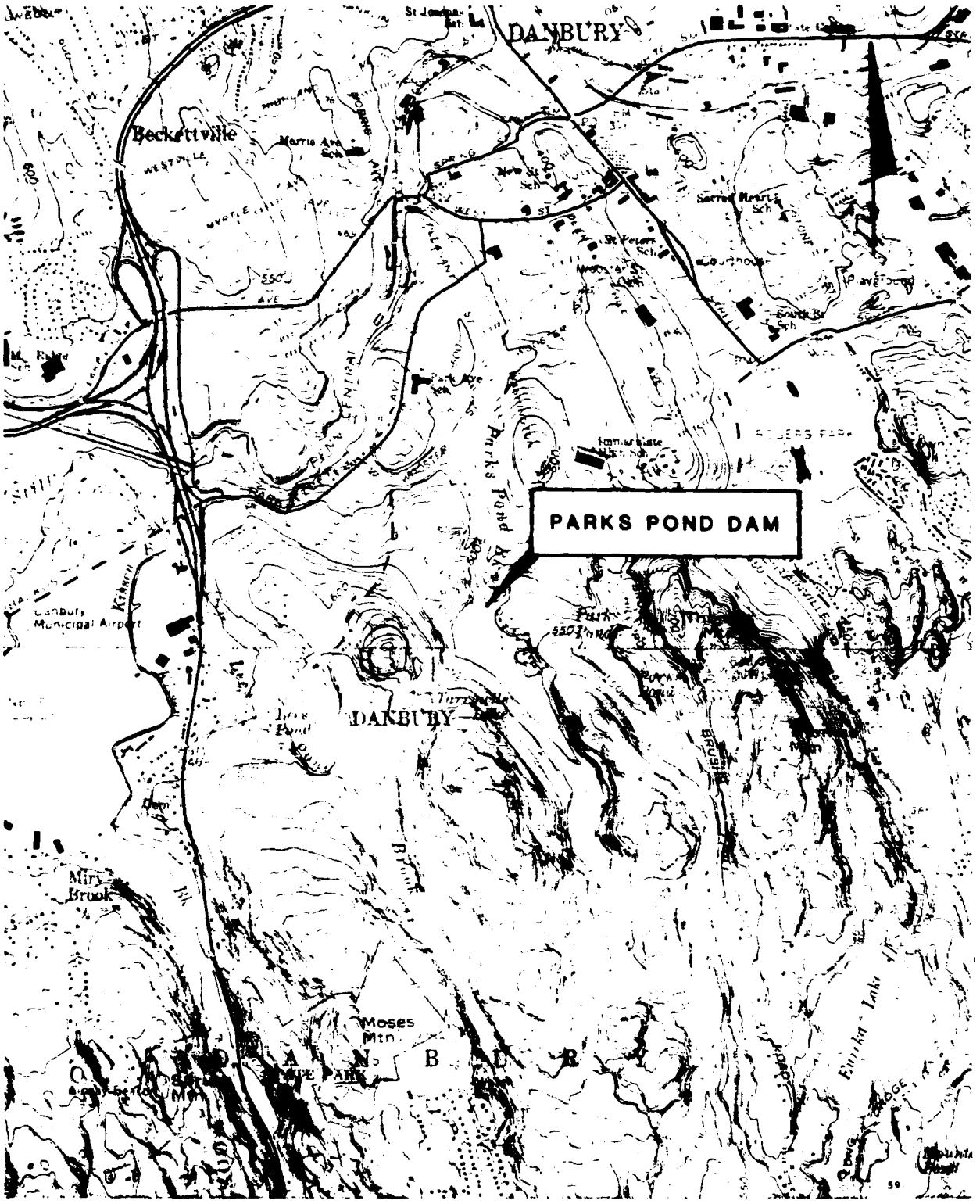
It is important to note that the condition of a dam depends on numerous and constantly changing internal and external conditions and is evolutionary in nature. It would be incorrect to assume that the present condition of the dam will continue to represent the condition of the dam at some point in the future. Only through continued care and inspection can there be any chance that unsafe conditions be detected.

Phase I Inspections are not intended to provide detailed hydrologic and hydraulic analyses. In accordance with the established guidelines, the Spillway Test Flood is based on the estimated Probable Maximum Flood for the region (greatest reasonably possible storm runoff), or fractions thereof. Because of the magnitude and variety of such a storm event, a finding that a spillway will not pass the test flood should not be interpreted as necessarily posing a highly inadequate condition. The test flood provides a measure of relative spillway capacity and serves as an aide in determining the need for more detailed hydrologic and hydraulic studies considering the size of the dam, its general condition and the downstream damage potential.

The Phase I Inspection does not include an assessment of the need for fences, gates, "no trespassing" signs, repairs to existing fences and railings and other items which may be needed to minimize trespass and provide greater security for the facility and safety to the public. An evaluation of the project for compliance with Occupational Safety and Hazard Administration's (OSHA) rules and regulations is also excluded.

TABLE OF CONTENTS

PARKS POND DAM



QUADRANGLE **DANBURY, CT**

US ARMY, CORPS OF ENGINEERS
NEW ENGLAND DIVISION
WALTHAM, MASS.

SCALE IN FEET
2000' 0 2000' 4000'
1" = 2000'

LOCATION MAP

PHASE I INSPECTION REPORT

PARKS POND DAM CT 00071

SECTION 1 - PROJECT INFORMATION

1.1 General

a. Authority - Public Law 92-367, August 8, 1972 authorized the Secretary of the Army, through the Corps of Engineers, to initiate a National Program of Dam Inspections throughout the United States. The New England Division of the Corps of Engineers has been assigned the responsibility of supervising the inspection of dams within the New England Region. Storch Engineers has been retained by the New England Division to inspect and report on selected dams in the State of Connecticut. Authorization and notice to proceed were issued to Storch Engineers under a letter of March 6, 1980 from William E. Hodgson, Jr., Colonel, Corps of Engineers. Contract No. DACW33-80-C-0035 has been assigned by the Corps of Engineers for this work.

b. Purpose of Inspection -

(1) Perform technical inspection and evaluation of non-Federal dams to identify conditions which threaten the public safety and thus permit correction in a timely manner by non-Federal interests.

(2) Encourage and prepare the states to initiate quickly effective dam safety programs for non-Federal dams.

(3) To update, verify and complete the National Inventory of Dams.

1.2 Description of Project

a. Location - The Parks Pond Dam is located approximately 1 mile southeast of the intersection of Route 7 and Interstate 84 in the City of Danbury,

Connecticut (See Location Map). The coordinates of the dam are approximately 41°-22.5' north latitude and 73°-27' west longitude. The dam is located on Parks Pond Brook in the Housatonic River Basin.

b. Description of Dam and Appurtenances - Parks Pond Dam is a cyclopean masonry/earth embankment that is 180 feet long and 12 feet high. The earth embankment is on the downstream side and has a 2:1 slope. The upstream face is cyclopean masonry with a vertical face.

The spillway is located on the southern half of the dam and consists of a 30.5-foot long concrete weir that drops 10 feet to a stilling basin.

There is a lower gate house with a valve to control a discharge pipe that passes through the base of the dam. The location of the inlet or the outlet of the pipe is not known. The size of the pipe is unknown and the valve is inoperable.

c. Size Classification - Parks Pond Dam has a maximum height of 12 feet and a maximum storage of 100 acre-feet at the top of the dam. In accordance with the Recommended Guidelines for Safety Inspection of Dams established by the Corps of Engineers, the dam is classified as small (height less than 40 feet and storage less than 1,000 acre-feet).

d. Hazard Classification - Parks Pond Dam is classified as having a significant hazard potential. Failure of the dam could result in the loss of a few lives and cause significant property damage. Approximately 300 feet downstream are several homes where a culvert carries the discharge from the spillway under the neighborhood. First floor sills of the homes in the area of impact are approximately 4 feet above the streambed. Estimated flow and water depths just prior to dam failure at this location is 235 cfs at 1.5 feet and just after dam failure is 2,795 cfs at 5.5 feet.

e. Ownership - The Parks Pond Dam is owned by:

Mr. Paul d'Evegnee
21 Sunset Drive
Danbury, Connecticut 06810

f. Operator - The person in charge of day-to-day operation of the dam is the owner of the dam.

g. Purpose of Dam - The dam impounds the Parks Pond which is used strickly for recreation.

h. Design and Construction History - There are no design computations or drawings.

i. Normal Operational Procedure - There are no normal operational procedures.

1.3 Pertinent Data

a. Drainage Area - Parks Pond drainage basin is in the City of Danbury and is rectangular in shape. The area of the drainage basin is 320 acres (Appendix D - Plate 3). Approximately 5 percent of the drainage basin is natural storage and approximately 95 percent is undeveloped. The topography is hilly with elevations ranging from 950 (NGVD) to 488.2 (NGVD) at the spillway crest.

b. Discharge at Damsite - There are no records available for discharge at the dam.

(1)	Outlet works (conduit) size:	unknown
	Invert elevation (feet above NGVD):	unknown
	Discharge Capacity at top of dam:	unknown
(2)	Maximum known flood at damsite:	unknown
(3)	Ungated spillway capacity at top of dam:	235 cfs
	Elevation (NGVD):	490.2
(4)	Ungated spillway capacity at test flood elevation:	302 cfs

	Elevation (NGVD):	490.7
(5)	Gated spillway capacity at normal pool elevation:	N/A
	Elevation (NGVD):	N/A
(6)	Gated spillway capacity at test flood elevation:	N/A
	Elevation:	N/A
(7)	Total spillway capacity at test flood elevation:	302 cfs
	Elevation (NGVD):	490.7
(8)	Total project discharge at top of dam:	235 cfs
	Elevation (NGVD):	490.2
(9)	Total project discharge at test flood elevation:	445 cfs
	Elevation (NGVD):	490.7

c. Elevation (feet above NGVD)

(1)	Streambed at toe of dam:	476.2
(2)	Bottom of cutoff:	unknown
(3)	Maximum tailwater:	480
(4)	Normal pool:	488.2
(5)	Full flood control pool:	N/A
(6)	Spillway crest (ungated):	488.2
(7)	Design surcharge (original design):	unknown
(8)	Top of dam:	490.2
(9)	Test flood surcharge:	490.7

d. Reservoir (length in feet)

(1)	Normal pool:	2,300

(2)	Flood control pool:	N/A
(3)	Spillway crest pool:	2,300
(4)	Top of dam:	2,500
(5)	Test flood pool:	2,525
e.	Storage (acre-feet)	
(1)	Normal pool:	55
(2)	Flood control pool:	N/A
(3)	Spillway crest pool:	55
(4)	Top of dam:	100
(5)	Test flood pool:	110.5
f.	Reservoir Surface (acres)	
(1)	Normal pool:	13.7
(2)	Flood control pool:	N/A
(3)	Spillway crest:	13.7
(4)	Test flood pool:	22
(5)	Top of dam:	20
g.	Dam	
(1)	Type:	cyclopean masonry/ downstream earth embankment
(2)	Length:	180 feet
(3)	Height:	12 feet
(4)	Top width:	5 feet
(5)	Side slopes:	U/S - vertical D/S - 2:1
(6)	Zoning:	unknown

(7)	Impervious core:	unknown
(8)	Cutoff:	unknown
(9)	Grout curtain:	unknown
(10)	Other:	N/A
h.	Diversion and Regulating Tunnel	N/A
i.	Spillway	
(1)	Type:	concrete-broad crested
(2)	Length of weir:	30.5 feet
(3)	Crest elevation (without flashboard):	488.2
(4)	Gates:	N/A
(5)	U/S channel:	no channel
(6)	D/S channel:	30-foot natural channel
(7)	General:	N/A
j.	Regulating Outlets	
(1)	Invert elevation (NGVD):	unknown
(2)	Size:	unknown
(3)	Description:	unknown
(4)	Control Mechanism:	manually operated gate
(5)	Other:	gate not operable

SECTION 2 - ENGINEERING DATA

2.1 Design Data

There are no design computations or drawings available.

2.2 Construction Data

There are no records or drawings available for the construction of the dam.

2.3 Operation Data

Any type of operation at this dam is nonexistent. There is a discharge pipe but it is not operating.

2.4 Evaluation of Data

a. Availability - There were no computations or drawings available.

b. Adequacy - The information made available along with the visual inspection, past performance history and hydraulic/hydrologic assumptions were adequate to assess the condition of the facility.

c. Validity - Due to the lack of available data, the conclusions and recommendations found in this report are based on the visual inspection and hydraulic/hydrologic computations.

SECTION 3 - VISUAL INSPECTION

3.1 Findings

a. General - The visual inspection was conducted on April 22, 1980 by members of the engineering staff of Storch Engineers, D. Baugh and Associates, Inc. and Matthews Associates. A copy of the visual inspection check list is contained in Appendix A of this report. Selected photos of the dam and appurtenant structures are contained in Appendix C.

In general, the overall appearance and condition of the facility and its appurtenant structures is poor.

b. Dam - The dam is a cyclopean masonry/earth embankment. The downstream face is an earth embankment with a 2:1 slope. It is well vegetated with grass, brush and trees (Photos 1, 2 and 3). Along the toe of the dam, there are trees and brush which obscured the view of the toe (Overview Photo). The upstream face is cyclopean masonry and is eroded and cavitated at the water line (Photo 1). The top of the masonry is 5 feet wide and it too is cavitated (Photo 2). The top of the dam is level with no signs of settlement. The overall alignment of the dam is good and there are no signs of the dam ever being overtopped.

Just below the toe of the dam and around the west spillway training wall, there is a steady seepage flow (Photo 6). The amount of flow is negligible. This seepage is clear and does not show any signs of particle movement.

c. Appurtenant Structures - The lower gate house (Photos 7 and 8) is in poor condition with the walls and roof slab falling in. The valve inside the house is frozen closed and not operating. There is also some seepage coming

through the dirt floor of the gate chamber (Photo 8). The amount of flow is negligible. The seepage is a rust color which would indicate it is coming from the discharge pipe or valve.

The spillway is a concrete weir that is in poor condition (Photos 3 and 5). The concrete of the spillway is eroded and cavitated. There is no approach channel. The downstream channel is a natural channel (Photo 4). Just below the spillway, brush and debris has accumulated (Photo 3).

d. Reservoir Area - The area immediately adjacent to the dam is gently sloped and the remainder of the area is fairly steep and wooded. The shoreline shows no signs of sloughing or erosion and there is no development adjacent to the reservoir. A rapid rise in the water level of the reservoir will not endanger any life or property.

e. Downstream Channel - The downstream channel is in a natural state (Photo 4).

3.2 Evaluation

Overall, the general condition of the dam is poor. The visual inspection revealed items that lead to this assessment, and apparent areas of distress such as:

a. Seepage through the embankment and around the training wall.

b. Inoperation of the blowoff.

c. Poor condition of the concrete.

d. Brush and trees are growing on the downstream face of the dam along the toe and in the downstream channel.

SECTION 4 - OPERATIONAL AND MAINTENANCE PROCEDURES

4.1 Operational Procedures

a. General - The operation of this facility is strictly for the purpose of recreation and the water level is kept at or above spillway crest only because the discharge pipe and valve are not operating.

b. Description of any Warning System in Effect - There is no warning system in effect for this dam.

4.2 Maintenance Procedures

a. General - This dam appears to be given the very minimum of maintenance.

b. Operating Facilities - The valve is not operable.

4.3 Evaluation

The maintenance of the dam is less than adequate in that proper care of the dam embankment should be on a regular basis. The valve should be maintained in working order and there should be a proper operating procedure and warning system in effect.

SECTION 5 - EVALUATION OF HYDRAULIC/HYDROLOGIC FEATURES

5.1 General

Parks Pond Dam is a cyclopean masonry/earth embankment approximately 180 feet long and 12 feet high. The spillway is a concrete weir, 30.5 feet long. The downstream channel is 30 feet wide and is a natural state. A discharge pipe passes through the base of the dam. The size of the pipe is not known and the valve is inoperable.

The watershed encompasses 0.5 square miles and is 95 percent undeveloped. The topography is hilly with the terrain rising 461.8 feet from the spillway crest.

The pond has a total capacity of 100 acre-feet when the pond is at the top of the embankment and 55 acre-feet at the spillway crest. Therefore, there is approximately 45 acre-feet of storage available. The test flood outflow for this dam is 445 cfs and the spillway capacity is 235 cfs or approximately 52.8% of the test flood outflow.

5.2 Design Data

No design data is available.

5.3 Experience Data

Parks Pond Dam has experienced all the major storms of the 1930's and 1950's and most recently January, 1979. The flood of record resulted from the storm of October, 1955. No records are available for this flood, however, a past inspection report revealed that the dam was probably not overtopped during this storm.

5.4 Test Flood Analysis

Based on the guidelines found in the Recommended Guidelines for Safety Inspection of Dams, the dam is classified as a small structure with a significant

hazard potential. The test flood for these conditions range from the 100-year flood to 1/2 the Probable Maximum Flood. One half the PMF was used for this dam because of the possible loss of life.

Using the guide curves established by the Corps of Engineers (rolling terrain), the test flood inflow is 625 cfs. The routing procedure established by the Corps gives an approximate outflow of 445 cfs. The spillway capacity is approximately 235 cfs or approximately 52.8% of the test flood outflow. The test flood will overtop the dam by approximately 0.5 feet.

Storage behind the dam was assumed to begin at the spillway crest. Storage was determined by an average area depth analysis. Capacity curves for the spillway assumed a broad crested weir.

5.5 Dam Failure Analysis

A dam failure analysis was performed using the Rule of Thumb method in accordance with guidelines established by the Corps of Engineers. Failure was assumed to occur when the water level in the reservoir was at the top of the dam.

The spillway discharge just prior to dam failure is 235 cfs and will produce a depth of flow of approximately 1.5 feet several hundred feet downstream from the dam. The calculated dam failure discharge is 2,795 cfs and will produce a depth of flow of approximately 5.5 feet several hundred feet downstream from the dam or an increase in water depth at failure of approximately 4 feet. The failure analysis covered a distance of approximately 6,800 feet downstream where the depth of flow was calculated to be 3 feet or an increase in depth of 1.5 feet.

Failure of Parks Pond Dam may result in the loss of a few lives. Damage to structures, personal property and town roads may be appreciable

for several thousand feet downstream. Approximately 300 feet downstream are several homes where a culvert carries the discharge from the spillway under the neighborhood. First floor sills of the homes in the area of impact are approximately 4 feet above the streambed. Estimated flow and water depths just prior to dam failure at this location is 235 cfs at 1.5 feet and just after dam failure is 2,795 cfs at 5.5 feet.

SECTION 6 - EVALUATION OF STRUCTURAL STABILITY

6.1 Visual Observations

The general structural stability of the dam is good as evidenced by the vertical, horizontal and lateral alignment of the embankment. The upstream face of the dam is severely eroded and cavitated at the water line. The embankment is in good stable condition and has a good vegetative cover, however, there are some large trees growing on it. The concrete of the spillway weir, like the rest of the dam, is in poor condition. The outlet chamber is in poor condition.

Some possible problem areas are seepage around the spillway training walls, through the gate chamber floor and the poor condition of the concrete.

6.2 Design and Construction Data

No design data or construction drawings are available.

6.3 Post-Construction Changes

No information on post-construction changes are available.

6.4 Seismic Stability

The dam is located in Seismic Zone 1 and in accordance with Recommended Phase I Guidelines does not warrant a seismic analysis.

SECTION 7 - ASSESSMENT, RECOMMENDATIONS AND REMEDIAL MEASURES

7.1 Dam Assessment

a. Condition - After consideration of the available information, the results of the inspection, contact with the owner and hydraulic/hydrologic computations, the general condition of the Parks Pond Dam is fair.

b. Adequacy of Information - The information available is such that an assessment of the safety of the dam should be based on the available data, the visual inspection results, past operational performance of the dam and its appurtenant structures and computations developed for this report.

c. Urgency - It is considered that the recommendations suggested below be implemented within one year after receipt of this Phase I Inspection Report.

7.2 Recommendations

The following recommendations should be carried out under the direction of a qualified registered engineer.

a. Seepage around the spillway training wall and in the gate chamber should be investigated further to determine its origin and monitored to determine any changes.

b. Trees including stumps and root systems should be removed from the toe and embankment slopes and backfilled with proper material.

c. Prepare a detailed hydraulic/hydrologic study to determine spillway adequacy and an increase of the total project discharge if necessary.

7.3 Remedial Measures

a. Operation and Maintenance Procedures -

(1) Spillway channel should be cleared of brush and debris.

(2) Vegetation on the downstream face of the dam and along the toe of the dam should be removed. This will facilitate the visual observation of existing and potential seepage.

(3) Discharge valve and pipe should be repaired. Valve for the discharge pipe should be on the upstream side of the embankment.

(4) Concrete of the dam, spillway and training walls should be repaired.

(5) Plans for a regular program of operation and maintenance of the dam should be initiated.

(6) Plans for around-the-clock surveillance should be developed for periods of unusually heavy rains and a formal downstream warning system should be put into operation for use in the event of an emergency.

(7) A program of annual technical inspection should be established.

7.4 Alternatives

None.

APPENDIX A

INSPECTION CHECK LIST

INSPECTION CHECK LIST

PARTY ORGANIZATION

PROJECT PARKS POND DAM

DATE 4/22/80

TIME 8:30 a.m.

WEATHER Clear

W.S. ELEV._____ U.S.____ DN.S.

PARTY:

1. John F. Schearer, SE Civil
2. Kenneth J. Pudeler, SE Civil
3. Gary J. Giroux, SE Hyd/Civil
4. Michael Haire, DBA Struct/Geo.
5. Peter Austin, DBA Civil
6. John Pozzato, MA, Mech.
7.
8.
9.
10.

PROJECT FEATURE	INSPECTED BY	REMARKS
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITIONS
DAM EMBANKMENT	
Crest Elevation	Fair
Current Pool Elevation	Poor - eroded concrete
Maximum Impoundment to Date	Unknown
Surface Cracks	None
Pavement Condition	N/A
Movement or Settlement of Crest	None observed
Lateral Movement	None
Vertical Alignment	Good
Horizontal Alignment	Good
Condition at Abutment and at Concrete Structures	Fair
Indications of Movement of Structural Items on Slopes	Outlet structure: appears walls have been pushed or heaved
Trespassing on Slopes	Problem
Vegitation on Slopes	Trees and brush
Sloughing or Erosion of Slopes or Abutments	None observed
Rock Slope Protection - Riprap Failures	N/A
Unusual Movement or Cracking at or near Toes	None
Unusual Embankment or Downstream Seepage	Minor seepage - almost negligible
Piping or Boils	None
Foundation Drainage Features	None
Toe Drains	None
Instrumentation System	None

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
CUTLET WORKS - INTAKE CHANNEL AND INTAKE STRUCTURE	No intake structure observed underwater
a. Approach Channel	
Slope Conditions	
Bottom Conditions	
Rock Slides or Falls	
Log Boom	
Debris	
Condition of Concrete Lining	
Drains or Weep Holes	
b. Intake Structure	
Condition of Concrete	
Stop Logs and Slots	

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
OUTLET WORKS - CONTROL TOWER	None N/A
a. Concrete and Structural	
General Condition	
Condition of Joints	
Spalling	
Visible Reinforcing	
Rusting or Staining of Concrete	
Any Seepage or Efflorescence	
Joint Alignment	
Unusual Seepage or Leaks in Gate Chamber	
Cracks	
Rusting or Corrosion of Steel	
b. Mechanical and Electrical	
Air Vents	
Float Wells	
Crane Hoist	
Elevator	
Hydraulic System	
Service Gates	
Emergency Gates	
Lightning Protection System	
Emergency Power System	
Wiring and Lighting System in Gate Chamber	

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
OUTLET WORKS - TRANSITION AND CONDUIT	Unknown - underwater or under dam
General Condition of Concrete	
Rust or Staining on Concrete	
Spalling	
Erosion or Cavitation	
Cracking	
Alignment of Monoliths	
Alignment of Joints	
Numbering of Monoliths	

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
OUTLET WORKS - OUTLET STRUCTURE AND OUTLET CHANNEL	
General Condition of Concrete	Poor - on the verge of collapse
Rust or Staining	None
Spalling	None
Erosion or Cavitation	N/A
Visible Reinforcing	Yes
Any Seepage or Efflorescence	Yes - seepage in ground
Condition at Joints	Very poor
Drain holes	None observed
Channel	Could not find
Loose Rock or Trees Overhanging Channel	" " "
Condition of Discharge Channel	" " "

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
OUTLET WORKS - SPILLWAY WEIR, APPROACH AND DISCHARGE CHANNELS	
a. Approach Channel	Underwater
General Condition	
Loose Rock Overhanging Channel	
Trees Overhanging Channel	
Floor of Approach Channel	
b. Weir and Training Walls	
General Condition of Concrete	Poor
Rust or Staining	None
Spalling	Yes - eroded at base
Any Visible Reinforcing	No - appears unreinforced
Any Seepage or Efflorescence	Some
Drain Holes	None
c. Discharge Channel	
General Condition	Fair
Loose Rock Overhanging Channel	None
Trees Overhanging Channel	Yes
Floor of Channel	Some natural rock, some silting
Other Obstructions	Debris at base of spillway

INSPECTION CHECK LIST

PROJECT PARKS POND DAM DATE 4/22/80

PROJECT FEATURE _____ NAME _____

DISCIPLINE _____ NAME _____

AREA EVALUATED	CONDITION
OUTLET WORKS - SERVICE BRIDGE	N/A
a. Super Structure	
Bearings	
Anchor Bolts	
Bridge Seat	
Longitudinal Members	
Under Side of Deck	
Secondary Bracing	
Deck	
Drainage System	
Railings	
Expansion Joints	
Paint	
b. Abutment & Piers	
General Condition of Concrete	
Alignment of Abutment	
Approach to Bridge	
Condition of Seat & Backwall	

APPENDIX B

ENGINEERING DATA

Information pertaining to the history, maintenance and modification to Parks Pond Dam as well as copies of past reports are located at:

State of Connecticut
Department of Environmental Protection
Water Resources Unit
State Office Building
Hartford, Connecticut 06115

A. M. McKENZIE
CIVIL ENGINEER
MEM. M. AM. SOC. C. E.

1300 MAIN STREET
SOUTH MERIDEN, CONN

September 27, 1936.

1963

Water Resources Commission,
State of Connecticut,
State Office Building,
Hartford, 15,
Connecticut.

Terrywile Lake
(Parks Pond)
Danbury
Ref:
Owner -Terrywile Realty Co.,
45 West St.,
Danbury, Conn.
H. D. Van Houten, V. P.

Gentlemen:

There are three ponds involved in this property but this report is concerned principally with the dam on the middle pond which is by far the largest of the three. It is about 2800 feet long and greatest width is about 700 feet. The water area at spillway elevation is about 32 acres. A commercial map of the City of Danbury shows the ponds just outside the city limits, south of Southern Boulevard and west of Terrywile Lake Drive. The area around the north end of the ponds is is a thickly built-up residential section. The dam is about a mile east, and a little south of the Danbury Fair Grounds and can be most easily approached from Route 7, via Southern Blvd.

2. The deterioration of the dam on the middle pond does not seem to be serious at this time. It consists of erosion of the concrete at the water line on the upstream face, the entire surface of the spillway and the lower part of the spillway wingwalls.

If the dam failed during a flood there could be serious damage to property downstream - loss of life not probable.

If the dam failed during ordinary flows there might be damage to property downstream - loss of life unlikely.

There are city streets and a residence lot under which the discharge from the lake passes; see later comment on concrete pipe culvert

3. The dam seems to be of cyclopean masonry judging from the boulders protruding from the top and sides of the structure. The downstream side is backed by earth fill which shows no signs of erosion. On the west side of the spillway the downstream slope is thickly planted with pine trees from 4"ϕ to 15"ϕ; the slope on the other side of the spillway is covered with grass and brush. The over-all length of the dam is 180' with a 32' spillway. See sketch and photos for details.

3. (cont.)

There is no information available on the foundation of the dam. There are no visible rock out-croppings in the immediate vacinity and my guess is that the dam is founded on the material of the original stream bed which is probably gravel.

The original spillway surface might have been an "ogee" section but the shape is now quite irregular and rough. Based on a possible original section the capacity might have been about 300 c.f.s. In it's present condition I would reduce the capacity to 65% - say 200 c.f.s.

The existing freeboard is 2' - if this is not maintained the earth fill might be washed out. Not considered serious at this time.

There are no visible leaks thru or under the dam at this date. No cracks or displacement was observed. There is very considerable erosion along the water line, upstream face, and at the bottom of the wing walls on the inside face. The entire downstream face of the spillway is eroded and quite rough. See sketch and photos for more detail.

4. The drainage area above the dam is about 0.6 square miles, quite steep and thickly wooded.

The best data regarding possible peak discharge from the water shed is that given in Paper 1662, Proceedings of the A. S. C. E., Actual observed discharges of small streams, comparable to the stream under consideration here, and in the immediate vacinity, vary from 360 c.f.s to over 1100 c.f.s. These figures are for the floods in the fall of 1955 which are the largest ever recorded in the New England States. These quantities are much greater than any orinarily used formula will give.

The estimated capacity of the spillway in it"s existing condition is 200 c.f.s.

It is not likely that floods equal to those of 1955 will occur again in the next 50 years and there is no evidence to indicate that the capacity of the spillway was exceeded in 1955.

5. The dam does not appear to be unsafe at the present time and periodic inspections should not be necessary if the reapirs are made within the next year.

6. The water in the lake should be lowered about 3' so that the damaged masonry at the water line on the upstream face, the entire face of the spillway and the lower part of the wingwalls can be cleaned up and the structure restored by pouring new concrete. See sketch indicating possible method of making repairs. A few feet outside the lower end of the east wingwall there is what appears to be the top of a gate valve on a drain thru the dam. The valve might be 10" or 12" in diameter; neither end of the pipe is visible. The valve is covered by a badly disintegrated concrte enclosure perhaps 4' x 7' inside. The drain should be cleaned and the

6. (cont.)
valve repaired or replaced so that there will be some way of controling the water level in the lake.

It is probably too late to start repairs on the dam this year; the work could be most advantageously done during the dry season next year.

It is not considered that any immediate action is required at this time. The structure is basicly sound and stable and, barring some unpredictable catastrophy, is safe for another winter season.

The only immediate problem which this investigation brings out is the 30"ø culvert which carries the entire discharge from the Terry Wile ponds under Terrywile Lake Drive and Southern Boulavard and spills it into an open channel. This culvert seems to cross private property for a part of it's length.

The culvert is about 250' long with a slope of about 4' in 100'. The intake is a circular masonry wall just a few feet below the spillway of the lower of the three ponds. See photo. The pipe seems to be in good condition and, based on a value of "n" equals .015 in Manning's formula, will have a maximum capacity of about 45 c.f.s. Assuming that the maximum capacity of the dam, 200 c.f.s. might be reached, it is obvious that the culvert is much too small. During the unusual floods of 1955 the culvert was greatly overloaded, the stream washing over the streets and lawns and doing considerable damage. The exact runoff, or discharge, at this time is not known.

To at least partially correct this situation I recommend that additional culvert capacity be provided. The most economical proceedure might be to in-stall a new 48"ø R.C.P. culvert alongside the existing 30"ø or to replace the 30" with a new 60"ø pipe. Either scheme will give a capacity of 130 c.f.s. This operation could well be carried out any time before next year's spring floods.

7.& 8. The middle pond dam was probably built 50, or more years ago and there is no evidence of it's having been damaged by floods, including those of 1955, which were the highest on record in this area. Therefore, I am of the opinion that the existing spillway, when properly repaired will have sufficient capacity for the foreseeable future. The additional culvert capacity should be provided at once. The normal flow over the spillway is very small; on the date of the inspection it was less than 1c.f.s

9. It does not appear that an order to repair the dam has to be issued at this time. A letter of advice should be sent to the owner describing the condition and suggested repairs. The culvert situation should be corrected before the spring flood season of 1964. It is possible that the City of Danbury is responsible for the culvert carrying the flow from the ponds.

A. M. McKENZIE
CIVIL ENGINEER
MEMB. N. AM. SOC. C. E.
1000 MAIN STREET
SOUTH MERIDEN, CONN.

The Terrywile Lake appears partly on the Danbury sheet and partly on the Bethel sheet of the U. S. C. & G. Survey Topographic Maps.

Mr. Muchmore's letter refers to the culvert under Southern Boulevard as being 24"ϕ/- I believe that it is actually 30"ϕ

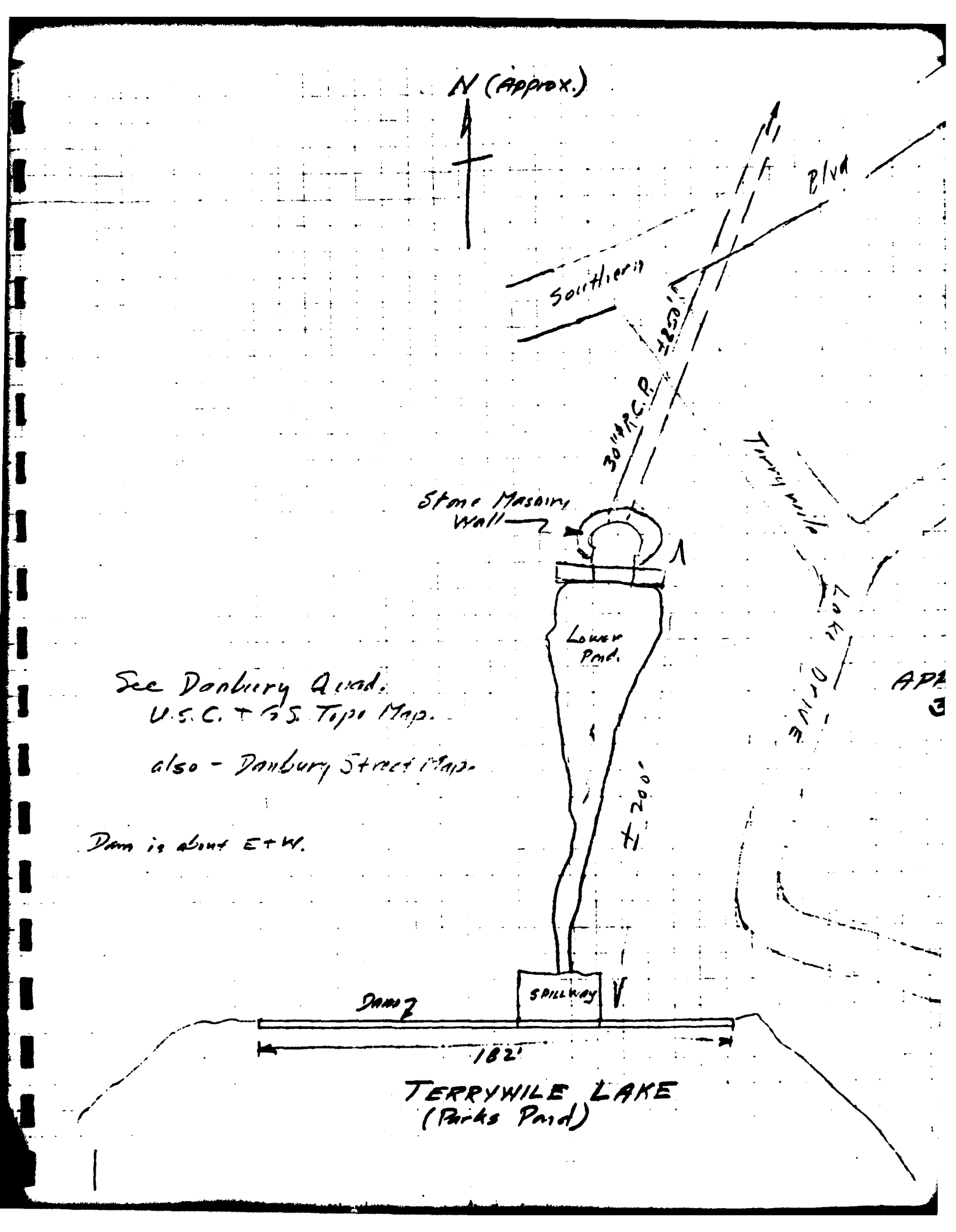
Yours very truly

A. M. McKenzie.

Enclosures: 6 - photographs

1 - sketch showing some details of the dam

1 - sketch indicating approximate location of 30'ϕ concrete pipe drain under Terrywile Lake Drive and Southern Blvd.



See Danbury Quad.
U.S.C.T & G.S. Topo Map.

also - Danbury Street Map.

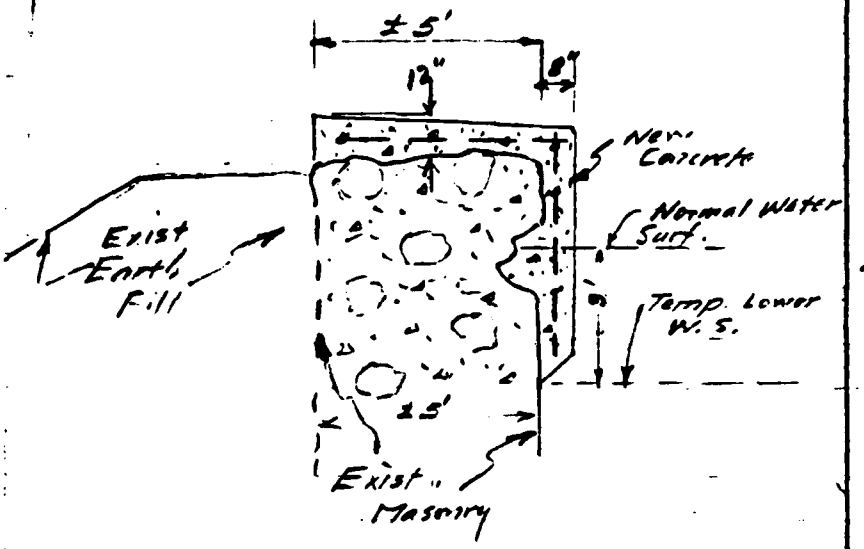
Dam is about E+W.

TERRYWILE LAKE
(Parks Pond)

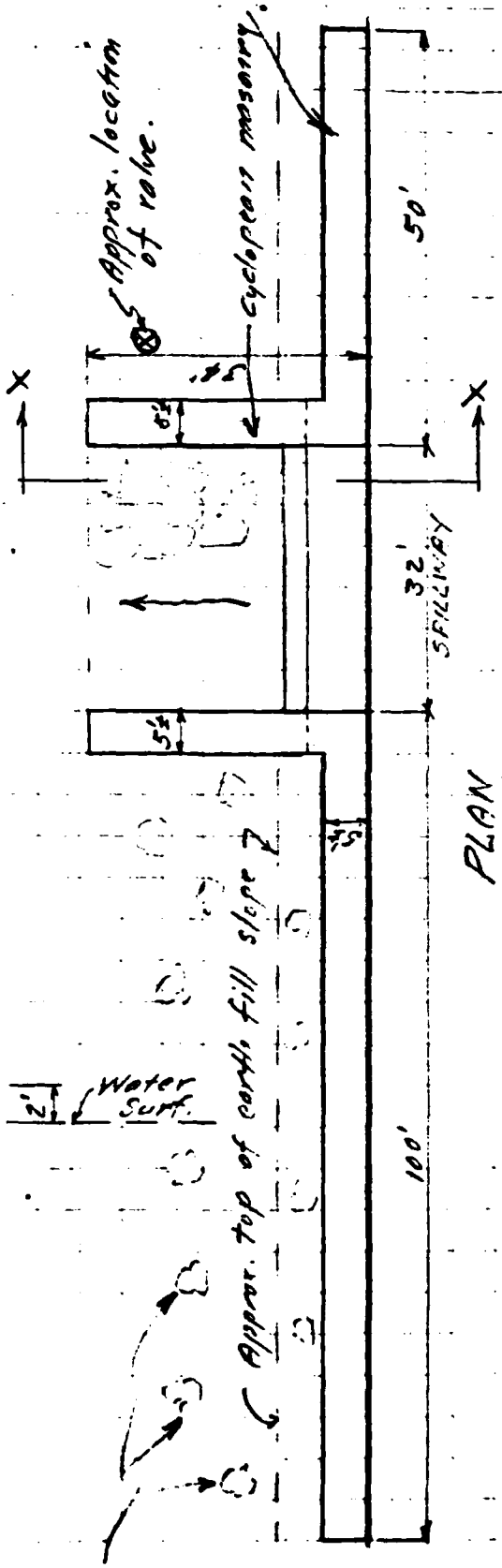
SKETCH SHOWING
APPROX. LOCATION OF
30"ϕ R.C.P. CULVERT.
(NO SCALE)

TERRYWILE LAKE DAM.
(PARK POND)
DANBURY.

9/21/63

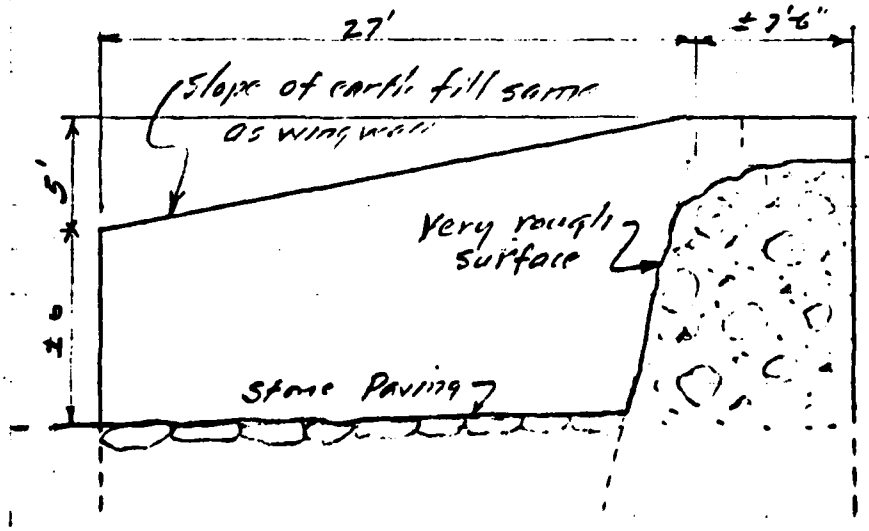


Possible Method of Repairing Masonry



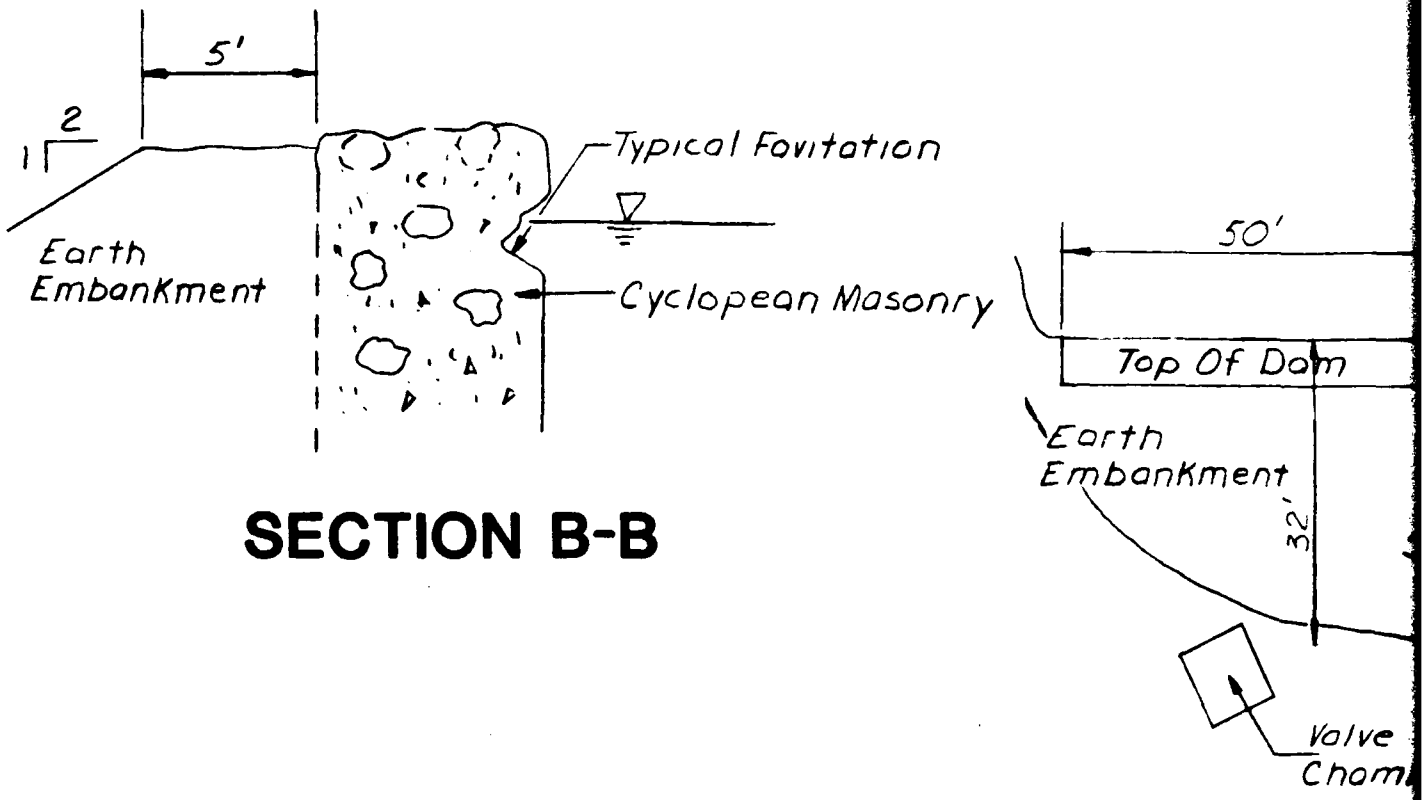
PLAN
1" = 20'

EXISTING DAM

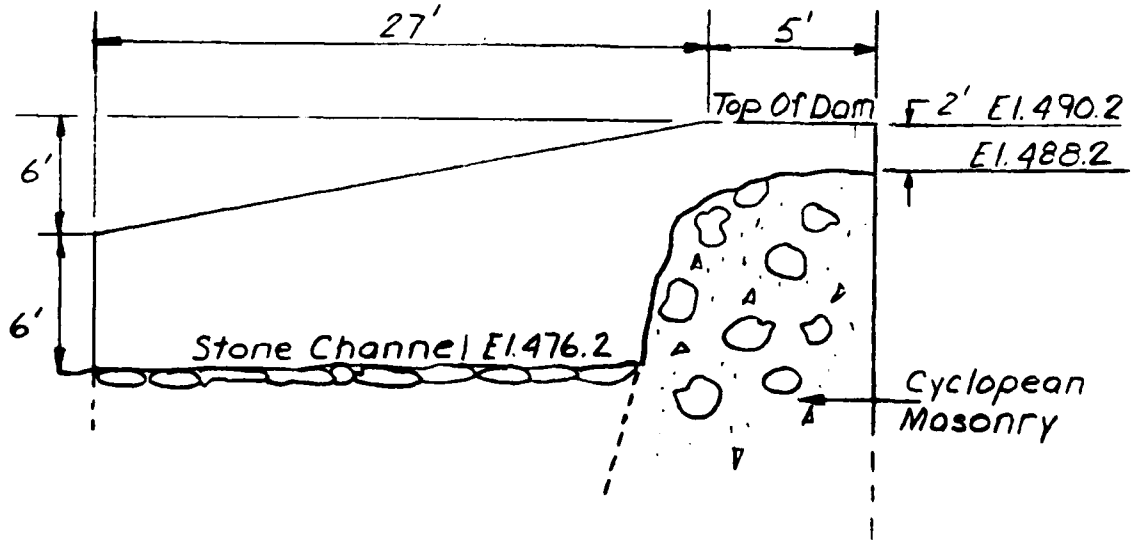


SECT. - X-X Thru Spillway
scale 8" = 1'0"

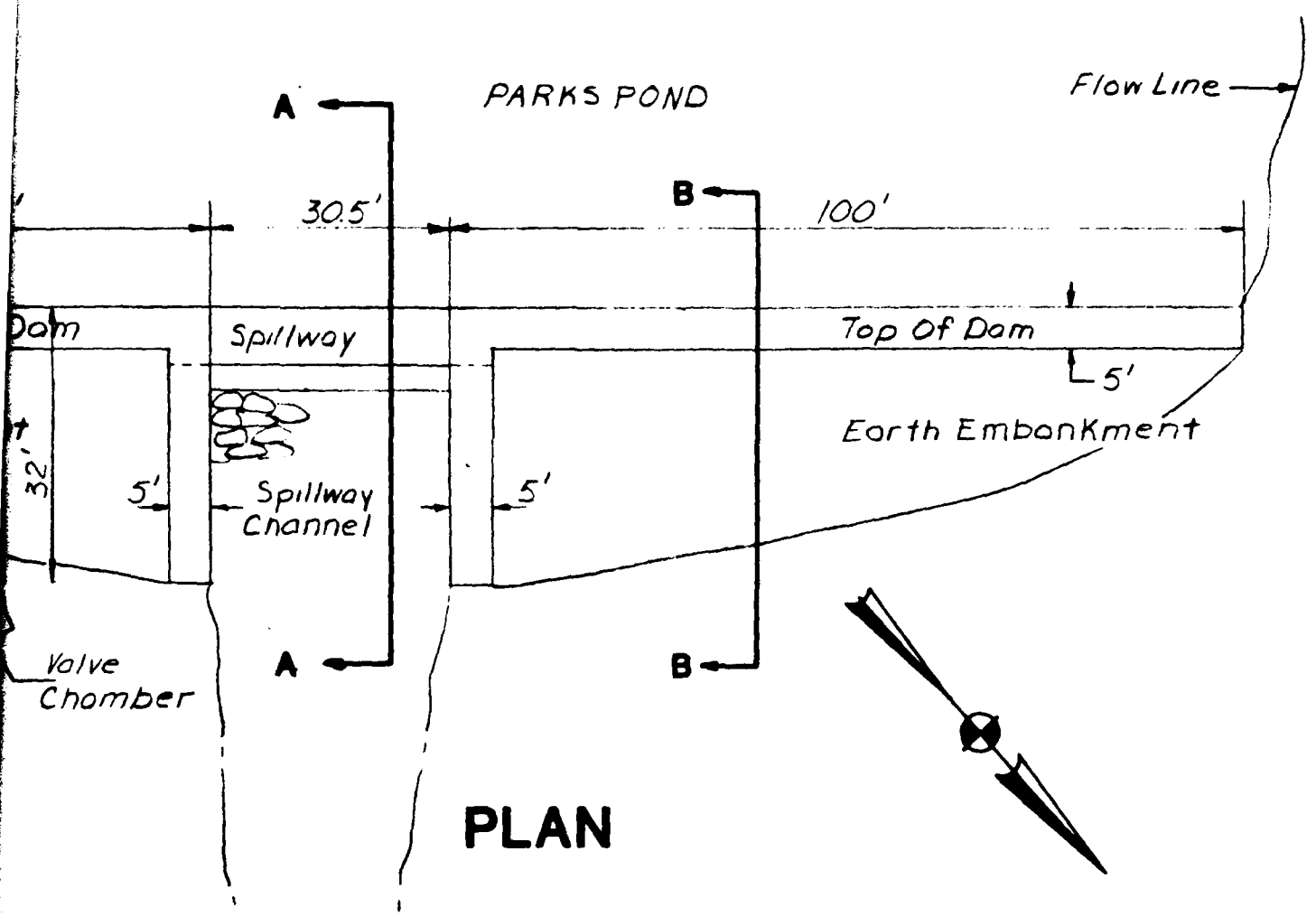
Slope on this side of Spillway thickly covered with pine trees 6" to 15" ø



SECTION B-B



SECTION A-A



PLAN

NOT TO SCALE

PLATE 1

STORCH ENGINEERS WETHERSFIELD, CONNECTICUT	U.S. ARMY ENGINEER DIV NEW ENGLAND CORPS OF ENGINEERS WALTHAM MASS

NATIONAL PROGRAM OF INSPECTION OF NON-FED. DAMS

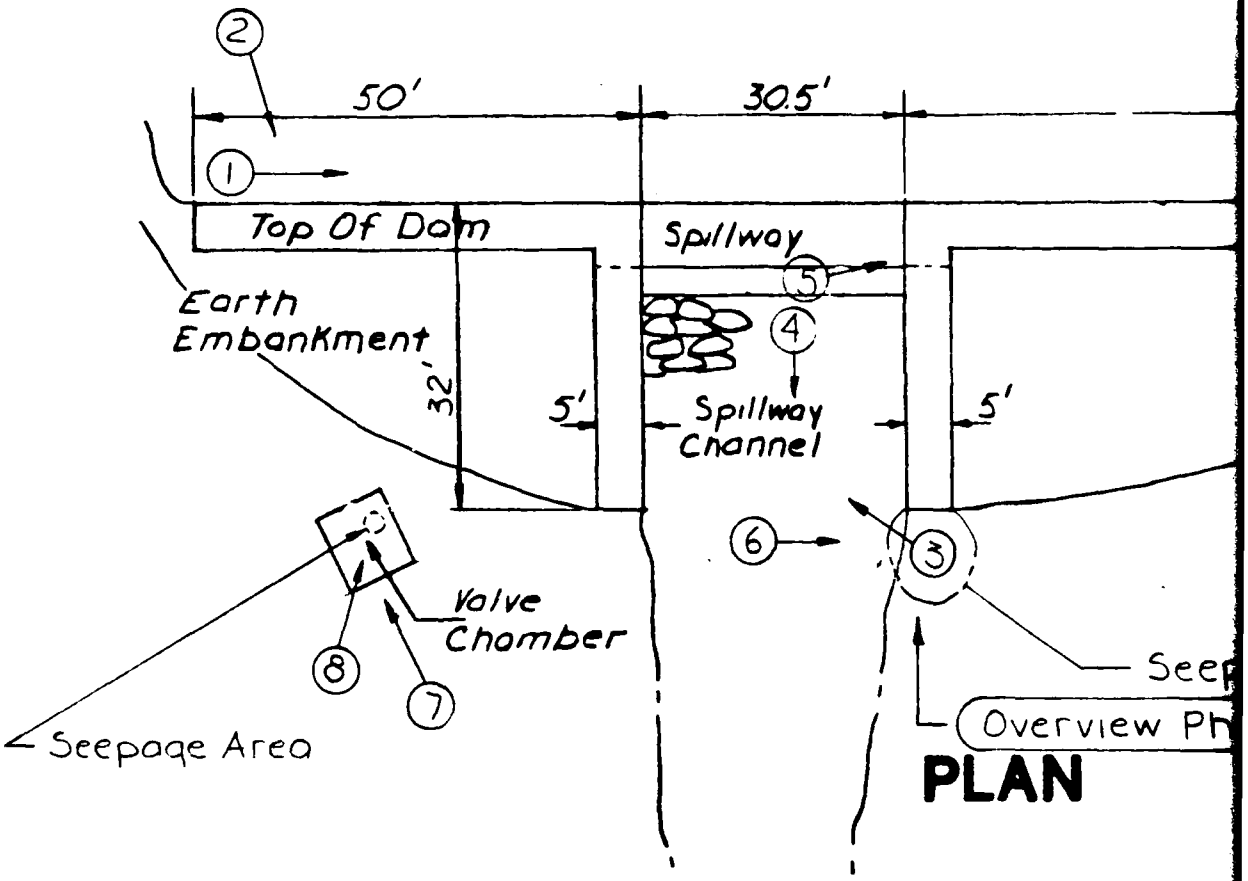
PARKS POND DAM

			SCALE AS SHOWN
			DATE JULY 1980

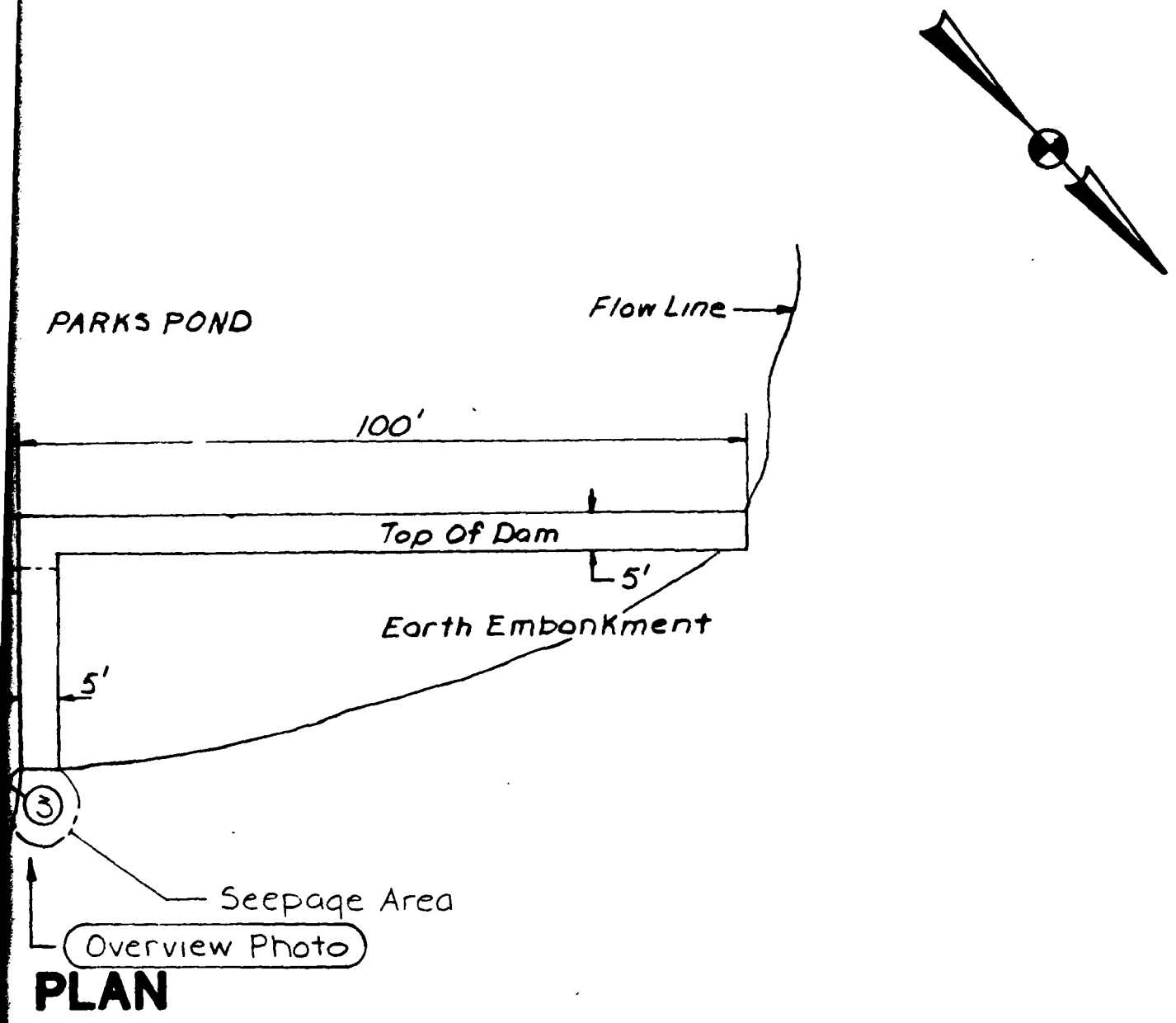
APPENDIX C

PHOTOGRAPHS

PARKS POND



PLAN



PLAN

NOT TO SCALE

PHOTO LOCATION PLAN

PLATE 2

STORCH ENGINEERS WETHERSFIELD, CONNECTICUT	U.S. ARMY ENGINEER DIV NEW ENGLAND CORPS OF ENGINEERS WALTHAM MASS

NATIONAL PROGRAM OF INSPECTION OF NON-FED. DAMS

PARKS POND DAM

2

			SCALE AS SHOWN
			DATE JULY 1980

PHOTO 2

CREST OF DAM

PHOTO 1

UPSTREAM FACE OF DAM

PHOTO 3

SPILLWAY - UPSTREAM

PHOTO 4

VIEW LOOKING DOWNSTREAM

PHOTO 5

CONCRETE CAVITATION AT SPILLWAY

PHOTO 6

SEEPAGE AT TOE OF SPILLWAY WINGWALL

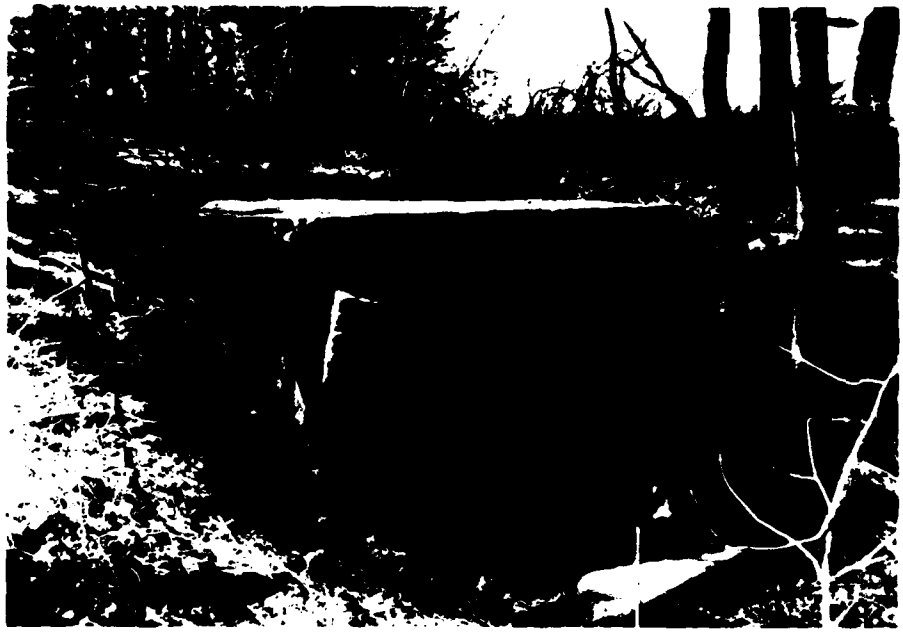


PHOTO 7

GATE HOUSE

PHOTO 8

SEEPAGE - INSIDE GATE HOUSE

APPENDIX D

HYDROLOGIC AND HYDRAULIC COMPUTATIONS

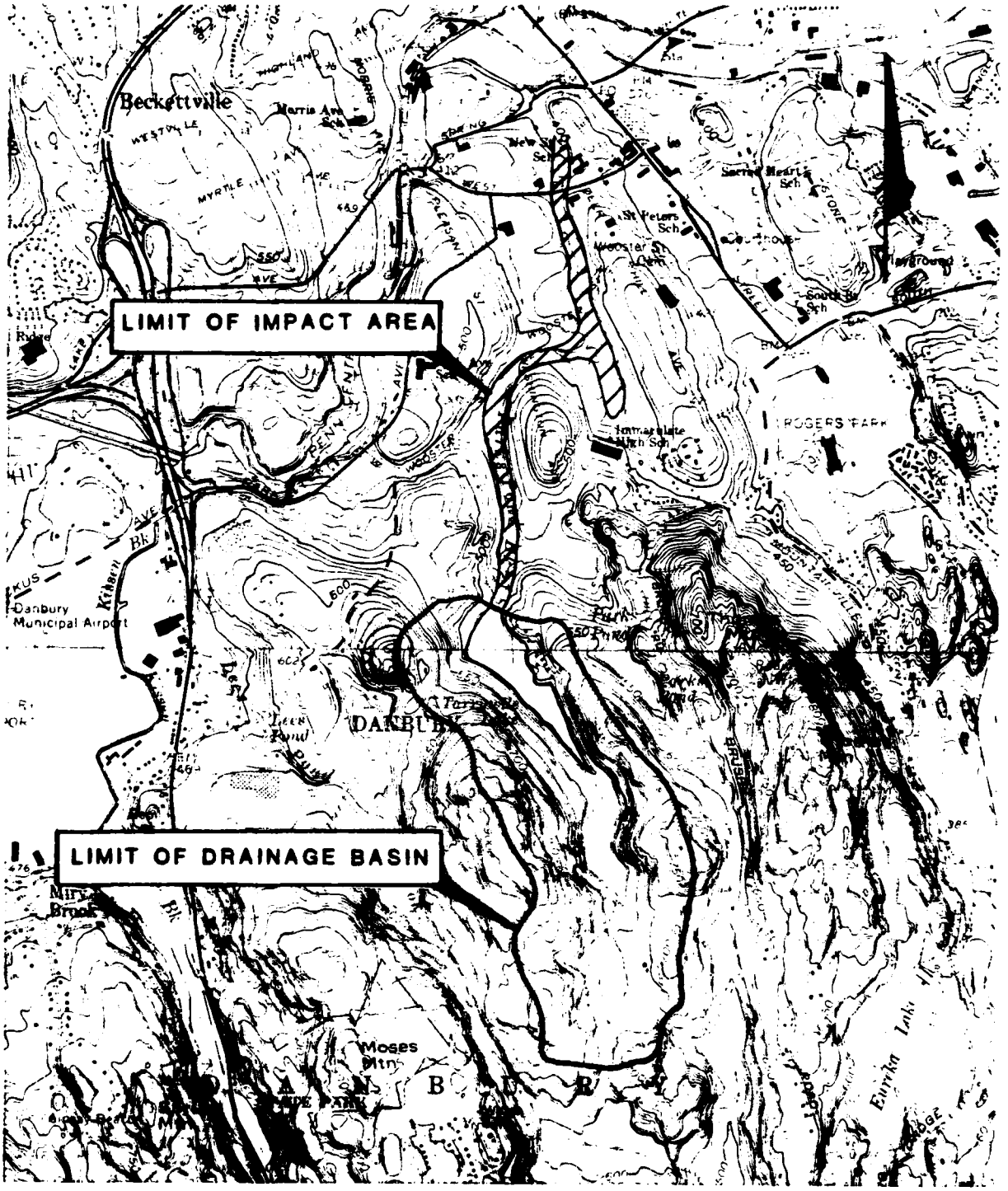


PLATE 3

STORCH ENGINEERS WETHERSFIELD, CONNECTICUT	U.S. ARMY ENGINEER DIV NEW ENGLAND CORPS OF ENGINEERS WALTHAM MASS

NATIONAL PROGRAM OF INSPECTION OF NON-FED. DAMS

PARKS POND DAM

			SCALE AS SHOWN
			DATE JULY 1980

STORCH ENGINEERS
Engineers · Landscape Architects
Planners · Environmental Consultants

JOB Phase I Dam Inspection - #4463
SHEET NO 1 OF 7
CALCULATED BY GJG DATE 7/25/80
CHECKED BY RDC DATE 7/15/80
Determination of PMF

NAME OF DAM PARKS POND DAM

DRAINAGE AREA 0.5 SM

INFLOW ½PMF = 1250 cfs/SM

½PMF = 1250(.5) = 625 cfs

$Q_{100} = 340 A^{.79} = 340 (.5)^{.79} = 197$ cfs

Estimating the effect of surcharge storage on the Maximum Probable Discharges

		Q_{100}
1.	Q_{P1} = 625 cfs	200
2a.	H_1 = 2.8' (elev.)	1.83'
b.	$STOR_1$ = 2.4"	1.5"
c.	$Q_{P2} = Q_{P1}(1 - STOR_1/9.5)$ = 464 cfs	138 cfs
3a.	H_2 = 2.55' $STOR_2$ = 2.06"	1.5' 1.2" 1.35"
b.	$STOR_A$ = 2.31"	
	$Q_{PA} = 625(1 - 2.31/9.5)$ = 473 cfs	146 cfs
	H_A = 2.55' $STOR_A$ = 2.0"	1.5' 1.2"

½PMF = 473 cfs

Capacity of the spillway when the pond elevation is at the top of the dam

Q = 235 cfs or 49.7 % of the ½PMF

160 % of Q_{100}

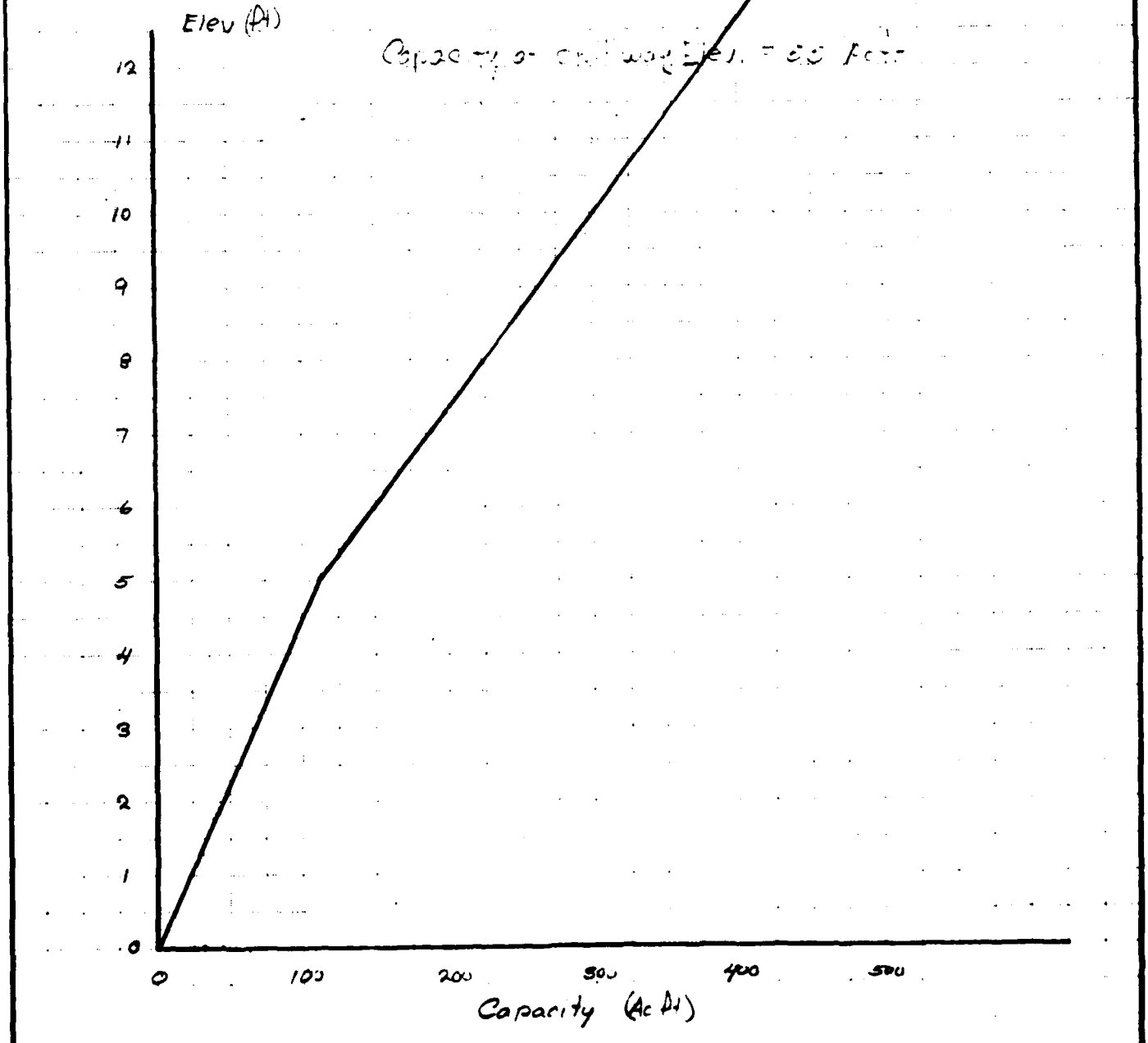
STORCH ENGINEERS
Engineers - Landscape Architects
Planners - Environmental Consultants

JOB Phase I Dam Inspection 4463
SHEET NO 2 OF 7
CALCULATED BY GJG DATE 4/16/80
CHECKED BY PDC DATE 7/15/80

AREA - CAPACITY

Name of Dam: PARKS POND DAM

ELEV	DEPTH	AREA	AVG. AREA	VOL	Σ VOL
0.0		13.7			0.0
	5.0		22.0	110.0	
5.0		30.3			110
	10.0		38.1	381	
15.0		45.9			491



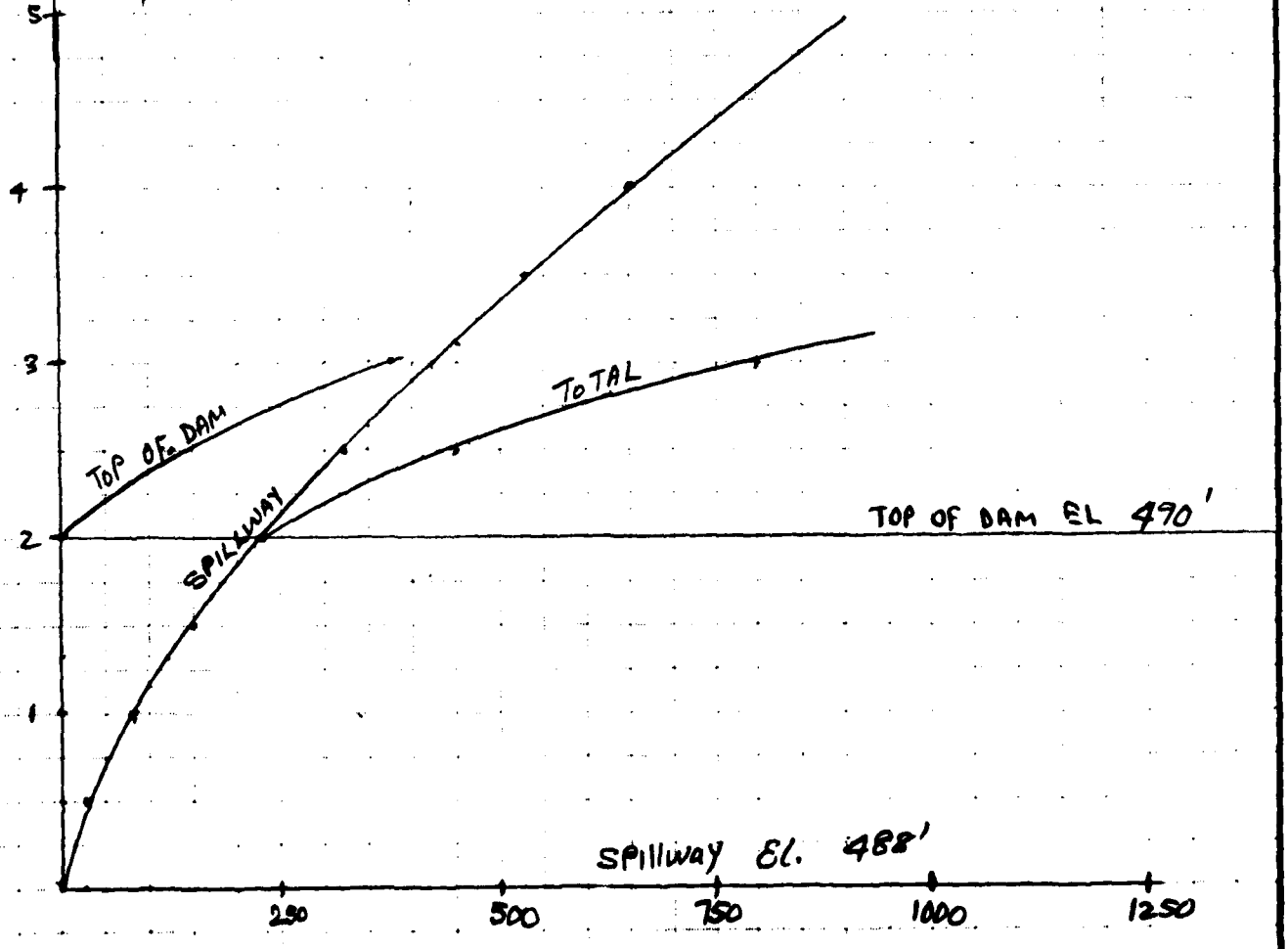
STORCH ENGINEERS
Engineers · Landscape Architects
Planners · Environmental Consultants

JOB Phase I Dam Inspection 4463
SHEET NO 3 OF 7
CALCULATED BY EEA DATE 7/26/85
CHECKED BY BDC DATE 7/30/85
SCALE Stage Discharge

NAME OF DAM PARKS POND DAM

$Q = CLH^{3/2}$

	Spillway I				Spillway II				Dam				
Elev	C	L	H	Q	C	L	H	Q	C	L	H	Q	QT
	2.65	30.5	.5	28.6					2.65	140	.5	181.2	450.7
	2.65	30.5	1.0	80.8					2.65	140	1.0	371	791
	2.65	30.5	1.5	148.5					2.65	140	1.5	682	
	2.65	30.5	2.0	228.6					2.65	140	2.0	1049	
	2.65	30.5	2.5	319.5									
	2.65	30.5	3.0	420									
	2.65	30.5	3.5	529									
	2.65	30.5	4.0	646.6									



Downstream Hydrographs

"Rule of Thumb" Guidance for Estimating Downstream Failure Hydrographs

NAME OF DAM PARKS POND DAM.

Section I at Dam

1. S = 100 Acft
2. $Q_{P1} = 8/27\ W_b \sqrt{g}\ Y^{3/2} = 8/27\ (40)\sqrt{32.2}\ 12^{3/2} = 2796$ cfs
3. See Sections

Section II at

4a. H_2 = 6' A_2 = 565 SF L_2 = 2000' V_2 = 126 Acft

b. $Q_{P2} = Q_{P1}\ (1-V_2/S)$ = 2070 cfs

c. H_2 = 5.5' A_2 = 500 SF

A_A = 533 SF V_2 = 24.5 Acft

$Q_{P2} = 2796\left[1 - 24.5/100\right] = 2110$ cfs

Section III at

4a. H_3 = 5.1' A_3 = 470 SF L_3 = 1300' V_3 = 141.0 Acft

b. $Q_{P3} = Q_{P2}\ (1-V_3/S)$ = 1720 cfs

c. H_3 = 4.8' A_3 = 400 SF

A_A = 435 SF V_3 = 13 Acft

$Q_{P3} = 1720(1 - 13/755) = 1420$ cfs

Section IV at

4a. H_4 = 4.0' A_4 = 500 SF L_4 = 3500' V_4 = 40.1 Acft

b. $Q_{P4} = Q_{P3}(1-V_4/S)$ = 507 cfs

c. H_4 = 2.5' A_4 = 250 SF

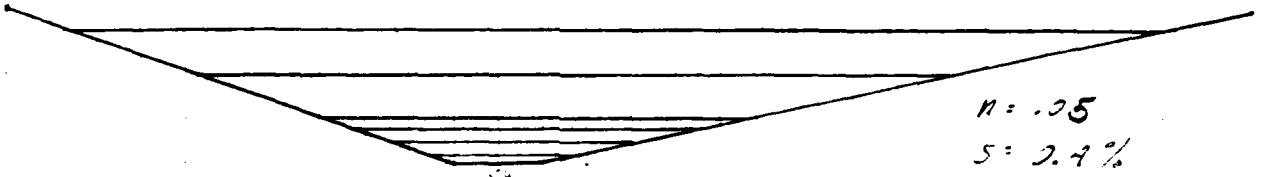
A_A = 375 SF V_4 = 30.1 Acft

$Q_{P4} = 1420\left(1 - 30.1/625\right) = 736$ cfs

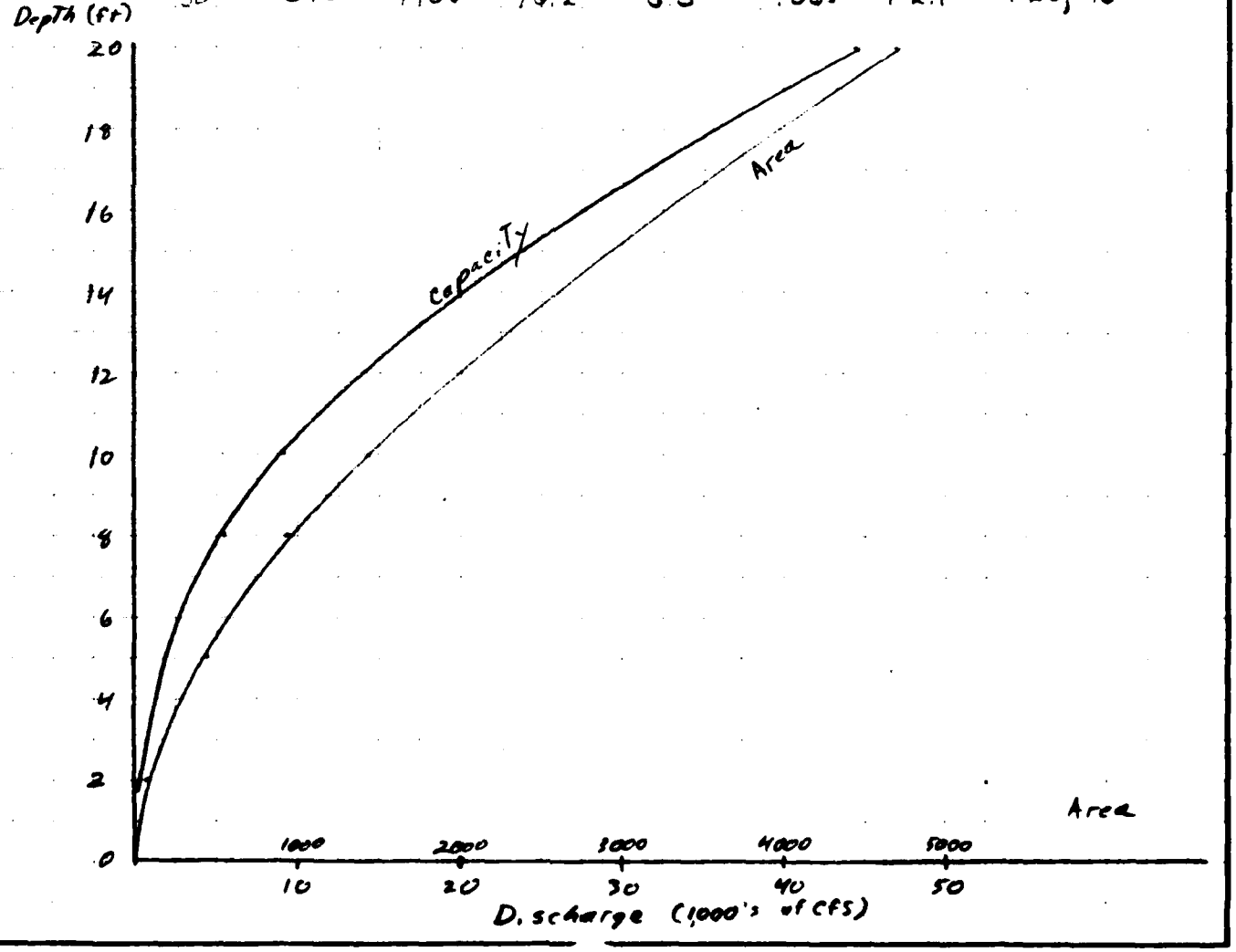
H = 3.0'

STORCH ENGINEERS/STORCH ASSOCIATES
Engineers · Landscape Architects
Planners · Environmental Consultants

SHEET NO 5 OF 7
CALCULATED BY BAF DATE 5/30/90
CHECKED BY BDC DATE 7/16/90
SCALE Sector II

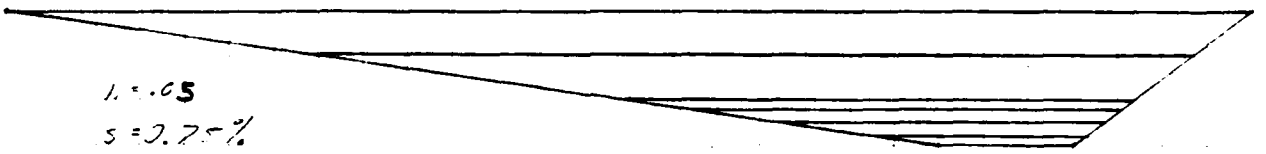


D	WP	A	R	$R^{\frac{2}{3}}$	$S^{\frac{1}{2}}$	V	Q
2	80	130	1.62	1.38	.063	2.6	340
5	135	460	3.41	2.25	.063	4.29	1,973
8	190	960	5.0	2.96	.063	5.56	5,340
10	240	1,450	6.0	3.33	.063	6.27	9,100
20	420	4,700	11.2	5.0	.063	9.5	44,500
30	610	9900	16.2	6.5	.063	12.1	120,400

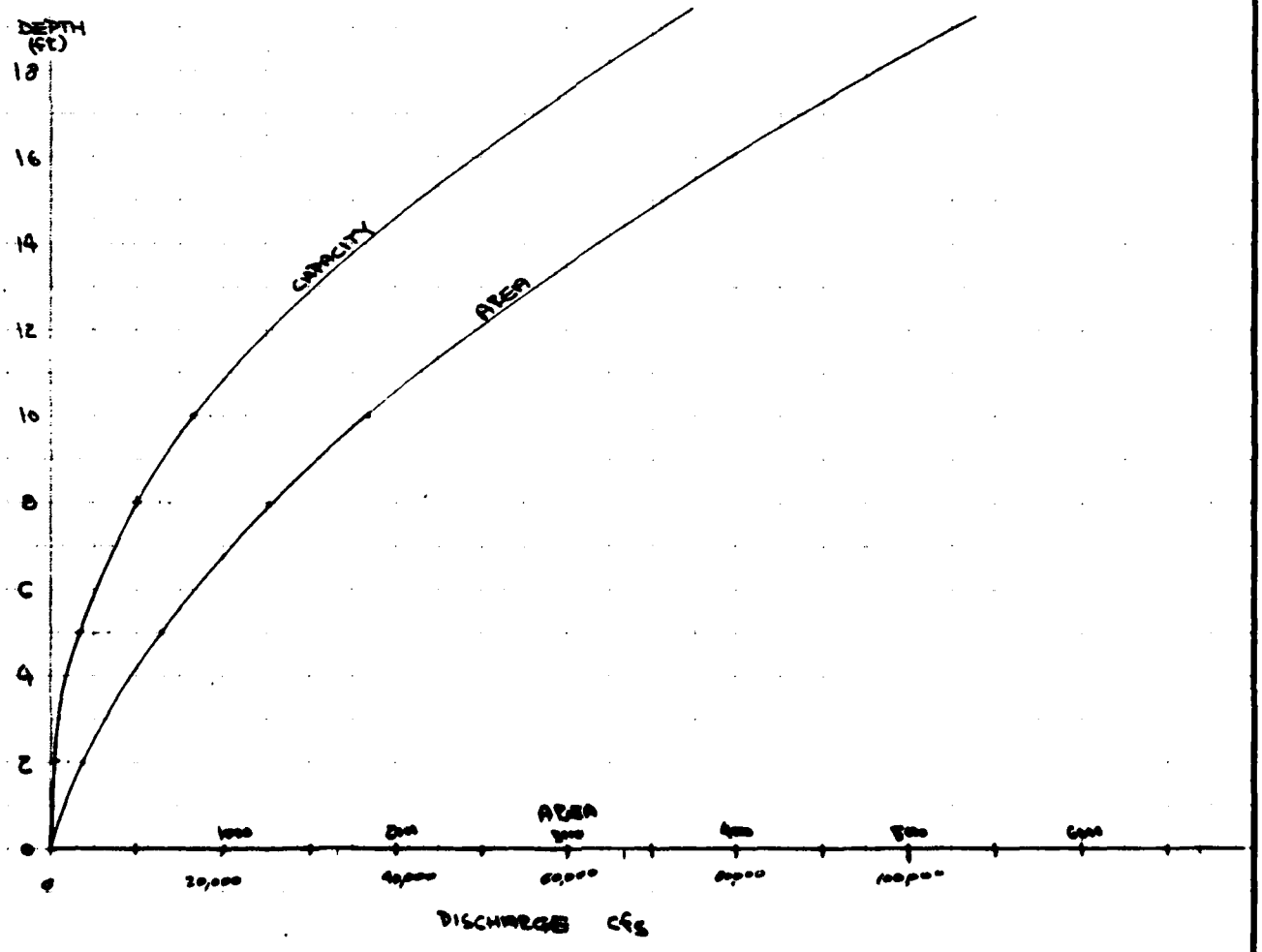


STORCH ENGINEERS/STORCH ASSOCIATES
Engineers - Landscape Architects
Planners - Environmental Consultants

JOB 41-163
SHEET NO 6 OF 7
CALCULATED BY BAH DATE 5/20/80
CHECKED BY BDC DATE 7/15/80
SCALE Same as 3

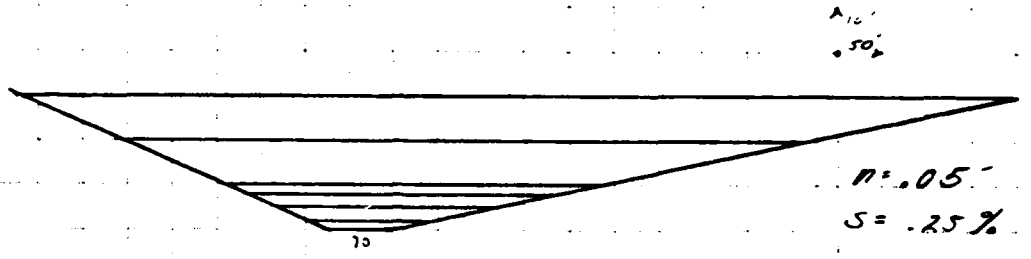


D	WP	A	R	$R^{\frac{2}{3}}$	$S^{\frac{1}{2}}$	V	Q
2	120	195	1.63	1.39	0.09	3.72	725
5	180	638	3.54	2.32		6.21	3962
8	240	1260	5.25	3.02		8.08	10,181
10	290	1825	6.29	3.41		9.12	16,644
20	500	5750	11.50	5.10		13.64	78,430
30	700	11,625	16.61	6.52	0.09	17.44	202,740

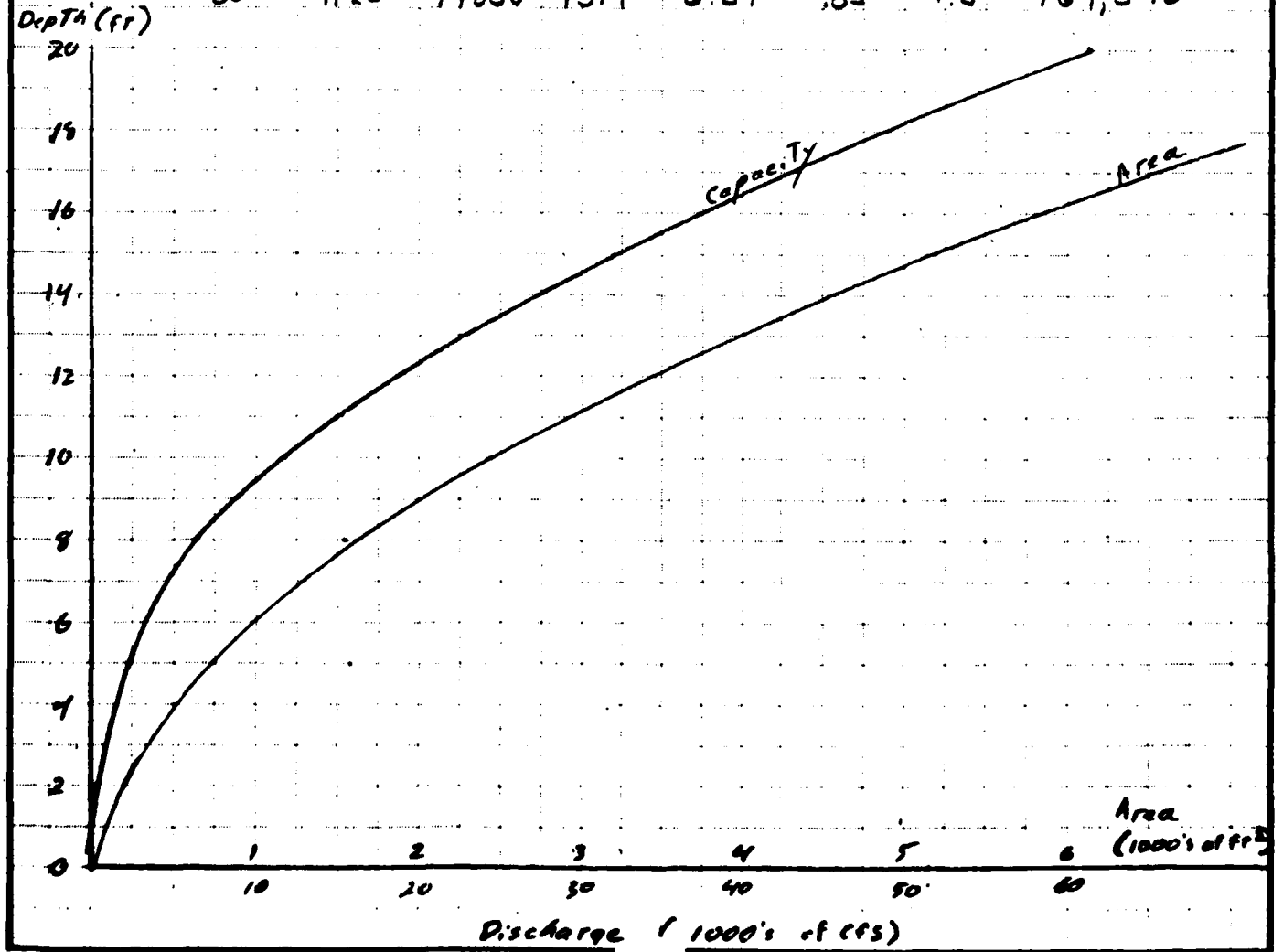


STORCH ENGINEERS/STORCH ASSOCIATES
Engineers · Landscape Architects
Planners · Environmental Consultants

JOB Route 3
SHEET NO 7 OF 7
CALCULATED BY BWH DATE 5/30/89
CHECKED BY EDC DATE 5/15/90
SCALE Section IV



D	WP	A	R	$R^{\frac{2}{3}}$	$S^{\frac{1}{2}}$	V	Q
2	130	200	1.5	1.3	.05	1.98	400
5	240	725	3.0	2.09	.05	3.11	2,260
8	340	1560	4.6	2.77	.05	4.1	6,130
10	420	2450	5.8	3.2	.05	4.8	11,870
20	760	8300	10.9	4.96	.05	7.4	61,200
30	1120	17650	15.9	6.39	.05	9.5	169,540



APPENDIX E

INFORMATION AS CONTAINED IN THE NATIONAL INVENTORY OF DAMS

INVENTORY OF DAMS IN THE UNITED STATES

STATE	IDENTITY NUMBER	DIVISION	STATE	COUNTY	CONGR DIST	STATE	COUNTY	CONGR DIST	NAME	LATITUDE (NORTH)	LONGITUDE (WEST)	REPORT DATE DAY | MO | YR
CT	74	NED	CT	001	05				PARKS POND DAM	4122.5	7327.0	18JUL80

POPULAR NAME	NAME OF IMPOUNDMENT
	PARKS POND

REGION	BASIN	RIVER OR STREAM	NEAREST DOWNSTREAM CITY-TOWN-VILLAGE	DIST FROM DAM (MI.)	POPULATION
01	10	PARKS POND BROOK	DANBURY	1	51000

TYPE OF DAM	YEAR COMPLETED	PURPOSES	STRUCTURAL HEIGHT (FT.)	HYDRAULIC HEIGHT (FT.)	IMPOUNDING CAPACITIES MAXIMUM (ACRE-FT.)	IMPOUNDING CAPACITIES NORMAL (ACRE-FT.)
HLCBRC	1900	R	12	12	100	55

DIST	OWN	FED R	PRV/FED	SCS A	VER/DATE
NED	N	N	N	N	

REMARKS
20=ESTIMATE

D/S HAS	SPILLWAY CREST LENGTH	SPILLWAY TYPE	SPILLWAY WIDTH (FT.)	MAXIMUM DISCHARGE (FT.)	VOLUME OF DAM (CY)	POWER CAPACITY INSTALLED (MW)	POWER CAPACITY PROPOSED (MW)	NAVIGATION LOCKS NO	LENGTH (FT.)	WIDTH (FT.)	LENGTH (FT.)	WIDTH (FT.)	LENGTH (FT.)	WIDTH (FT.)	LENGTH (FT.)	WIDTH (FT.)
2	180	U	31	235	700											

OWNER	ENGINEERING BY	CONSTRUCTION BY
PAUL D'EVEGNEE	NOT KNOWN	NOT KNOWN

REGULATORY AGENCY			
DESIGN	CONSTRUCTION	OPERATION	MAINTENANCE
		NONE	NONE

INSPECTION BY	INSPECTION DATE DAY | MO | YR	AUTHORITY FOR INSPECTION
STORCH ENGINEERS	22APR80	PL 92-367

REMARKS
10=ESTIMATE


DATE:
ILME